REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested. Claims 1-18, 26-31, 33, 35, 39, 40, and 42-48 are pending in the present application. Claims 19-25, 32, 34, 36-38 and 41 have been cancelled herein without prejudice or disclaimer to the subject matter recited therein.

Applicant appreciates the Examiner's indication that claims 15-18, 29-31, 33 and 42-47 are allowed and claim 13 is allowable if rewritten in independent form.

Applicant's representatives thank Examiner Iqbal Zaidi for the interview held on December 22, 2011. During the interview, the Examiner indicated that all the claims are in condition for allowance but requested that the language "the or each" in claim 1 be changed. Accordingly, Applicant proposed to amend claim 1 to recite "at least one" instead of "the or each" which the Examiner indicated is acceptable. The substance of the interview is reflected in the following remarks.

Claim Rejections – 35 U.S.C. §102

Claims 1-8, 12 and 14 were rejected under 35 U.S.C. §102(e) based on U.S. Patent No. 6,657,963 to Paquette et al. (hereinafter "Paquette"). Applicant respectfully traverses this rejection for at least the following reasons.

As described in the application, the invention, generally, relates to the idea of what is referred to in the present application as "RECN" (regional explicit congestion notification). RECN is different from local explicit congestion notification (LECN). In RECN, congestion is notified regionally instead of just locally. Hence, in claim 1 there is not only notification to an upstream port of congestion at a first port, but there is also notification to a further upstream port of the original downstream congestion, i.e. at the first port, when one or more conditions are satisfied. These conditions include, for example, the amount of data stored at the upstream port and when this reaches some threshold.

Paquette does not disclose, teach or even suggest RECN. Paquette, in col. 2, lines 49 to 60, discusses upstream switches detecting downstream congestion and reducing the rate at which frames are transferred from their ingress to egress ports that are providing data to the area that is congested. Ingress buffering capabilities of upstream switches are used to offload the data flow towards the downstream congestion. It is stated specifically that where "...the

congestion reaches a level that forces cells or frames to be discarded, the upstream propagation of the congestion information progressively moves any discard point closer to the traffic sources in the network..." One of ordinary skill in the art when reading Paquette would understand that this statement corresponds to a general discussion of the propagation of congestion upstream as found in a local explicit congestion notification (LECN) system.

Paquette, in col. 4, lines 25 to 30, states that the congested state and congestion notification "will trickle upstream" as each switch is able to notify neighboring switches of the congestion, regardless of any protocol differences. Paquette relates to how congestion notification can be achieved between neighboring switches operating in accordance with different communication protocols.

For example, as shown in Figure 1 in Paquette, a frame relay switch 130 is provided in communication with an internetworking switch. As stated at column 1, lines 46 to 51, when a communication network includes both frame relay and ATM switches, protocol dependent congestion information is typically only understood and processed by switches of like protocol and passed as data traffic by switches of dissimilar protocols. Therefore, Paquette relates to a means by which the protocol problem can be addressed such that congestion information can be appropriately understood by any switch irrespective of its type.

Paquette, in col. 3, lines 60 to 65, further describes a process by which a congestion notification may be sent upstream. The Examiner contends that Paquette, in col. 4, lines 30 to 35, discloses the feature that in dependence on the amount of data packets destined for the congested port stored at the upstream port, some action is taken. Applicant respectfully disagrees. The section to which the Examiner refers merely indicates that "the congested state and congestion notification will trickle upstream, as each switch is able to notify neighbouring switches of the congestion, regardless of any protocol differences. The upstream switches may adjust their transmission rates to help the original congested port or switch to recover..." (emphasis added). Clearly, Paquette merely relates to LECN. Paquette does NOT disclose, teach or suggest "in dependence on the amount of data packets destined for the congested port stored at said upstream port, sending from the upstream port to a further upstream port a message informing said further upstream port of the congestion at the first ingress or egress congested port, said further upstream port storing at said further upstream port data packets destined for the first ingress or egress congested port," as recited in claim 1.

The Examiner contends that Paquette, in col. 3, lines 44 to 47 and in col. 4, lines 20 to 30, discloses the feature of sending from the upstream port to a further upstream port a message informing the further upstream port of the congestion at the first ingress or egress congested port, the further upstream port storing data packets destined for the first ingress or egress congested port. Applicant respectfully disagrees.

The examiner in fact quotes the section from col. 4, lines 24 to 26 in Paquette which states that the internetworking switch 126 informs the ATM switch 124 that it (i.e., the switch 126) is congested such that upstream switches are utilized to offload the congestion. This statement clearly demonstrates that there is a clear distinction between the claimed subject matter and the disclosure of Paquette. Indeed, the communication from the upstream switch (the internetworking switch 126) to the further upstream switch 124 is merely in respect of congestion at the internetworking switch 126 (neighboring switch) and is not in respect to the original source of the congestion, i.e. the frame relay switch 130.

Therefore, Paquette merely indicates that when an upstream switch (the internetworking switch) itself becomes congested, it utilizes the congestion indication means available in the ATM protocol to inform the further upstream switch (the ATM switch 124) that it (i.e., the internetworking switch 126) is congested. Paquette simply relates to the fact that congestion notification is achievable between two switches of different protocols, i.e. the internetworking switch 126 and the ATM switch 124.

One of ordinary skill in the art would understand that informing upstream neighbors of the frame relay switch that the switch is overloaded is not a disclosure of sending from an upstream port to a further upstream port a message informing the further upstream port of congestion at the first ingress or egress congested port. Rather, it is simply, as is stated in Paquette, a way of informing the upstream neighbors of the frame relay switch, that the switch is overloaded. It should be borne in mind that the frame relay switch might have more than one internetworking switch to which it is connected and it is these that may constitute the "upstream neighbors."

The disclosure of Paquette is not a RECN system, but rather is a LECN system. The congestion notification works on a stage-by-stage basis in that notifications to an upstream port or switch are in respect of congestion at the particular stage in question. They are not in respect of congestion at the original source, or in the language of claim 1, the "first ingress or egress port."

Therefore, for at least the above reasons, Applicant respectfully submits that claim 1 is patentable over Paquette. Claims 2-8, 12 and 14 depend from claim 1. Therefore, Claims 2-8, 12 and 14 are also patentable over Paquette at least by virtue of their dependence from claim 1 and for the additional subject matter recited therein.

Therefore, it is respectfully requested that the rejection of claims 1-8, 12 and 14 under 35 U.S.C. §102(e) over Paquette be withdrawn.

Claim 26 contains corresponding features and specifically requires request generation means arranged to send a request to a further upstream port to request storage of data packets destined for the downstream congested port at the further upstream port when a threshold amount of data packets destined for the downstream congested port are stored in the storage at the upstream port. Therefore, for at least similar reasons provided above in respect to claim 1, claim 26 is also patentable over Paquette.

Claims 27 and 28 depend from claim 26. Therefore, claims 27 and 28 are also patentable over Paquette at least by virtue of their dependence from claim 26 and for the additional subject matter recited therein.

Claim 35 depends from claim 29. The Examiner indicated that claim 29 is allowed. Therefore, claim 35 is also allowable at least by virtue of its dependence from claim 29 and for the additional subject matter recited therein.

Claim 39 includes the requirement that the egress port includes means operable in use to receive a message from a downstream port, containing data relating to a congested port further downstream and a request to provide storage for data packets destined for the congested port further downstream. Thus, claim 39 is clearly directed to an end station for use in a network operating in accordance with the method of claim 1. Therefore, for at least similar reasons provided above with respect to claim 1, claim 39 is also patentable over Paquette.

Claim 40 depends from claim 39. Therefore, claim 40 is also patentable over Paquette at least by virtue of its dependence from claim 39 and for the additional subject matter recited therein.

Claim 48 depends from claim 1. Therefore, claim 48 is also patentable over Paquette at least by virtue of its dependence from claim 1 and for the additional subject matter recited therein.

Therefore, it is respectfully requested that the rejection of claims 26-28, 35, 39-40 and 48 over Paquette be withdrawn.

Claim Rejections – 35 U.S.C. §103

Claims 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Paquette in view of U.S. Patent Application Publication No. 2003/0193959 to Lui et al. (hereinafter "Lui"). Applicant respectfully traverses this rejection for at least the following reasons.

Claims 9-11 depend from claim 1. Therefore, claims 9-11 are also patentable over Paquette at least by virtue of their dependence from claim 1 and for the additional subject matter recited therein.

Lui fails to cure the deficiencies noted above in Paquette with respect to claim 1. Lui was relied upon by the Examiner as allegedly disclosing a message indicating that congestion has occurred includes a token to be kept by the upstream port to identify the upstream port as a leaf port within a congestion tree. Lui does not disclose, teach or even remotely suggest the subject matter recited in claim 1.

Consequently, neither Paquette nor Lui, alone or in combination, disclose, teach or suggest the subject matter recited in claims 9-11.

Therefore, Applicant respectfully submits that claims 9-11 are patentable over the purported combination of Paquette and Lui. Thus, it is respectfully requested that the rejection of claims 9-11 under 35 U.S.C. §103(a) over the purported combination of Paquette and Lui be withdrawn.

CONCLUSION

Applicant has addressed the Examiner's rejections and respectfully submits that the application is in condition for allowance. A notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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